

ABSTRACT

In a helium 3 refrigerator-utilizing magnetic property measurement system (MPMS) which enables magnetization measurement to be effected until 0.3 K, a main pipe, to enable magnetization measurement to be infallibly effected even when the upper limit of a magnetic field the MPMS can induce is applied, includes an upper supporting tube positioned in the uppermost part and allowing a bellows to be connected to the lateral part thereof, a condensing tube supported in the lower part of the upper supporting tube, an outer tube fixed in the lower part of the condensing tube and adapted to form an outer wall of an insulated vacuum chamber, and a lower inner tube forming an inner wall of the insulated vacuum chamber. In each of the tubes, the lower inner tube is formed of titanium. As a result, a background signal can be decreased and the measurement can be infallibly effected until the upper limit of the magnetic field of the MPMS.